

PATENT CLAIMS (AMENDED)

1. Electrically operated fuel metering pump (2) of a heating equipment (1), particularly a water heating equipment in the form of booster heating means or standstill heating means of a motor vehicle, with a control equipment (5) for the drive of the metering pump and if necessary of the heating equipment,
wherein
hydraulic/pneumatic states (Z) and parameters (F, N) of the fuel medium are detected in a signal detector (6) by means of the electrical behavior of the fuel metering pump (2), and are evaluated in the control equipment (5) for the control of the metering pump (2) and if necessary of the heating equipment (1), particularly of the fan motor (3) and/or the ignition device (4).
2. Fuel metering pump according to claim 1, wherein the metering pump (2) includes as drive means an electric motor or an electromagnetic coil with armature and pump piston as the medium

forwarding means and the electrical behavior is detected in the form of a characteristic course of the motor signal or coil current signal.

3. Fuel metering pump according to claim 2, wherein the course of the signal is in particular distinguished by a characteristic slope of the rising flank (F) and/or a characteristic level (N) or plateau, which is/are associated with a solid or liquid pumping medium and/or the viscosity of a pumping medium (gas/air, fuel, oil).
4. Fuel metering pump according to claim 3, wherein a set of medium parameters (K) is laid down in the control equipment (5).
5. Fuel metering pump according to claim 4, wherein the set of medium parameters (K) includes a set of temperature slope parameters.
6. Fuel metering pump according to claim 4 or 5, wherein the set of medium parameters (K) is in particular designed for diesel fuel and/or PME as the medium.
7. Process for the control of a heating equipment with an electrically

operated fuel metering pump (2), particularly of a water heating equipment in the form of booster heating means or standstill heating means of a motor vehicle, with a control equipment (5) for the drive of the metering pump and if necessary of the heating equipment, according to one of claims 1-6,

wherein

hydraulic/pneumatic states (Z) and parameters (F, N) of the fuel medium are detected in a signal detector (6) of the control equipment (5) by means of the electrical behavior of the fuel metering pump (2), particularly by means of the course of the current, and are evaluated in the control equipment (5), in which medium parameters (K) and heating equipment parameters (P), particularly ignition parameters, are laid down, for a detection of the medium, and are in particular used for an adjustment or corrective drive (10) of the metering pump (2) and/or an adjustment or corrective drive (11) of the fan motor (3) and/or a corrective drive (12) of the ignition device (4) or adjustment of the ignition parameters of the heating equipment (1).

Add A' >